

ABSTRACT

A scalable video transcoder with limited drifting error is disclosed. The transcoder accumulates re-quantization errors of I-frames or P-frames. The accumulated errors are only selectively introduced into the transcoding loop in every block to compensate for transcoding errors. A threshold algorithm adaptively utilizes the accumulated errors at block level to control drifting error at an acceptable limited level. Transcoder complexity is scalable because a DCT transform may be removed from the transcoder loop when the accumulated errors are not used for compensation. The re-quantization process can be simply implemented by look-up table(s), which significantly reduces the complexity of the re-quantization process.